

WHAT IS CLAIMED IS:

1 1. In a small, motor-driven vehicle having:
2 at least one steered wheel;
3 a motor for driving the small, motor-driven vehicle;
4 at least one motor-driven wheel;
5 a platform supporting the rider from the at least one driven wheel wherein the
6 rider supported on the platform directs the steered wheel while applying power from the
7 motor through a throttle mechanism to the driven wheel; and,
8 a throttle mechanism for applying power from the motor to the driven wheel;
9 the improvement of a throttle mechanism comprising:
10 a driven shaft from the motor contacting the periphery of the driven wheel;
11 means for providing the driven shaft with an adjustable diameter between a
12 small diameter and a larger diameter when driving the driven wheel whereby,
13 when the driven shaft is adjusted to have a small diameter, the small motor
14 driven vehicle is propelled at low speed and high torque, and
15 when the driven shaft is adjusted to have a large diameter, the small motor
16 driven vehicle is propelled at higher speed and lower torque.

1 2. The small, motor-driven vehicle according to claim 1 and wherein:
2 the small, motor-driven vehicle is a scooter.

1 3. The small, motor-driven vehicle according to claim 1 and wherein:
2 the means for providing the driven shaft with an adjustable diameter includes
3 two opposed parts for moving toward and away from one another.

1 4. The small, motor-driven vehicle according to claim 3 and wherein:
2 the two opposed parts produce a larger diameter when moved toward one
3 another and produce a smaller diameter when moved away from one another.

1 5. The small, motor-driven vehicle according to claim 1 and wherein:
2 the driven shaft is inflatable to provide a variable diameter.

1 6. The small, motor-driven vehicle according to claim 5 and wherein:
2 the driven shaft when inflated provides a larger diameter; and,
3 the driven shaft when deflated provides a smaller diameter.

1 7. In a small, motor-driven vehicle having:
2 at least one steered wheel;
3 a motor for driving the small, motor-driven vehicle;
4 at least one motor-driven wheel;
5 a platform supporting the rider from the at least one driven wheel wherein the
6 rider supported on the platform directs the steered wheel while applying power from the
7 motor through a throttle mechanism to the driven wheel; and
8 a throttle mechanism for applying power from the motor to the driven wheel;
9 a process of driving the driven wheel through the throttle mechanism
10 comprises the steps of:
11 providing a driven shaft from the motor for contacting the periphery of the
12 driven wheel;
13 providing the driven shaft with an adjustable diameter between a small
14 diameter and a larger diameter when driving the driven wheel;
15 adjusting the driven shaft to have a small diameter to propel the driven wheel
16 at low speed and high torque; and,
17 adjusting the driven shaft to have a larger diameter to propel the driven wheel
18 at high speed and low torque.

1 8. The process of driving the driven wheel through the throttle
2 mechanism of claim 7 and further including:
3 mounting the driven shaft on a pivot relative to the driven wheel; and,
4 pivoting the driven shaft toward and away from the wheel to apply power to
5 the driven wheel.

1 9. The process of driving the driven wheel through the throttle
2 mechanism of claim 7 and wherein the providing of the driven shaft with an adjustable
3 diameter includes the steps of:
4 providing the driven shaft with interlocking parts moving toward and away
5 from one another to provide a first shaft diameter in a first toward-and-away position and to
6 provide a second shaft diameter in a second toward-and-away position; and,
7 moving the interlocking parts of the driven shaft to vary the torque and speed
8 of the driven wheel.

1 10. The process of driving the driven wheel through the throttle
2 mechanism of claim 9 and wherein:
3 moving the interlocking parts of the driven shaft away from one another to
4 provide high torque and low speed to the driven wheel.

1 11. The process of driving the driven wheel through the throttle
2 mechanism of claim 7 and wherein the step of providing the driven shaft with an adjustable
3 diameter includes:
4 providing the driven shaft with an inflatable diameter;
5 inflating the driven shaft to provide the driven wheel with high speed and low
6 torque; and
7 deflating the driven shaft to provide the driven wheel with low speed and high
8 torque.